



Watch Out for *Balls of Tin*

BY ERIC BUDD

Whether you're a fan of *Bridgerton*, *Breaking Bad*, or *Buffy the Vampire Slayer*, everyone loves streaming a good series. Assistant Professor Rachele Dermer (Communications Media) has created a series called *Balls of Tin*. Dermer has already completed season one, and is currently working on season two. Throughout the production process, she has used FSU students and alums, along with professional actors, to bring her vision to the screen.

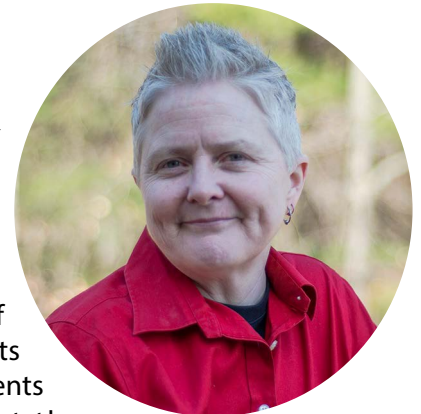
Balls of Tin is a Mockumentary about a crew making a film about mountain biking, but they are stuck with a lead actor who can't actually bike! An avid biker herself, the idea for the series came to her from her experiences riding with a group. According to Dermer, one of the guys always wanted to stop and do what is called "sessioning things"--- which is when you do something over and over again, like go over a jump or off a drop. Invariably, he would ride up to it repeatedly, before ultimately declaring that it really was not doable after all. Dermer thought his actions were really funny, and it became the inspiration for her series.

In addition to enjoying mountain biking, Dermer is a big TV fan, and fan of serial narratives. In the past, Dermer feels that series were seen as less prestigious than filmmaking. In other words, if you couldn't make it in film, then you were in television. However, times have changed, and series have "kind of exploded," according to Dermer. In a series, "You can do a lot more now, because you have a lot more time thanks to streaming technologies.

Shows like *Twin Peaks*, *X-Files*, and *Breaking Bad* set the stage for what could happen in a series."

Once Dermer set out to make the series, one of the exciting developments was the role of FSU students and alums throughout the production process. "The idea of doing a project with students and alum evolved, and as we started working on it, they became a driving force behind it." Luckily, despite the pandemic, there was a "magical summer" when it abated a little, so production of the series could move forward. A lot of Dermer's students had been left without any production classes during the height of the pandemic, so "there was an amazing mix of wants and needs."

Initially, Dermer applied for a grant so that she could hire students to help write the episodes. She reached out to some of her best students, and then ran a Writers' Room with them to get ideas for the episodes. According to Dermer, "The students brought so much, things that I wouldn't have thought of or considered." Each student wrote an episode, with a couple of students writing two episodes together. Two of the actors in *Balls of Tin* are students, while the rest are professional actors. Additionally, alums held most of the key positions, everyone from the producer, to the Director of



Photography, and gaffer. Roughly 20-25 students, and 6 alums, were involved throughout the process.

Although Dermer had originally planned on just making one season, everyone was so excited and enthusiastic about the project that they started working on episodes for season 2 while still completing season 1! The plan is to show it at a film festival which screens pilots and series, where it will hopefully get picked up. Otherwise, it will be released on YouTube. While Dermer's friend from mountain biking was never able to pull off the tricks he aspired to, Dermer has produced an exciting new series, and offered her students and alums an amazing experience in the process.



From the Co-Coordinator, Eric Budd and Elise Takehana



Whew! Another semester for the books. With the fall grading behind us and a short reprieve ahead, we would like to mark our gratitude to all our colleagues who shared their work with the campus community this past semester. During Research Week Kiernan Riley, Daniel Welsh, Erin Rehrig, Michael Hove, William Sisk, Laurie Link, and Karen DeAngelis presented posters.

Several others shared their work in lightning talks. Thank you Eric Budd, J.J. Sylvia, Katharine Covino, Eric Williams, Patricia Kio, Heather Urbanski, and Benjamin Railton for being so generous with your time and sharing such thought-provoking talks. It is no small feat to maintain an active research agenda with a four-four teaching load, much less to prioritize sharing that work with the campus community. We also deeply appreciate those who made the time to attend, especially Emma Downs who so thoughtfully brought her entire FYE class!



Creating a Sense of Belonging in the Classroom

BY ERIC BUDD

For the past three years, several faculty members at Fitchburg State have been applying in their classrooms the Pedagogy of Real Talk developed by Dr. Paul Hernandez. For the faculty members applying the pedagogy, they believed it was an effective way to engage students with the course material. However, was it? How could they be sure it was working? The members of the first cohort of the Faculty Academy¹ set out to test the pedagogy, and they just had an article published in *The Journal of University Teaching and Learning Practice* with their findings. The title of their article is "Empathy in Action: Developing a Sense of Belonging with the Pedagogy of 'Real Talk.'"

The faculty members designed a survey that they distributed to their students in the classes where they had applied the pedagogy. After the IRB approved their request to study the pedagogy's efficacy, they just needed to figure out what exactly they wanted to focus upon! As luck would have it, Kisha Tracy received a call for papers from *The Journal of University Teaching and Learning Practice* for a special issue they were planning on creating a sense of belonging in the classroom.

Students, especially those from traditionally underrepresented groups, can feel like they don't belong in the classroom. If they don't feel wanted in the classroom, then they won't feel a sense of connection, either to their professor, to the class, or to the course material. Numerous studies have shown how important a

sense of belonging is for the learning process, but there was a dearth in the literature on actual ways to create it. Therefore, the faculty members set out to fill that void. Their study represents the first attempt to test the efficacy of a pedagogy to see whether it could enhance a student's sense of belonging and connection.

The Pedagogy of Real Talks seeks to increase student engagement and connections, and thus their sense of belonging. According to the faculty members, "the pedagogy allows for so many vectors of personal connection--- to their professor, and to other students--- because they learn about each other's lives." Additionally, the pedagogy helps to neutralize in-group and out-group dynamics because the students don't retreat into their balkanized groups, but rather create a learning community that ties them all together. The pedagogy also helps to create a sense of belonging by valuing the experiences, knowledge, and views of all members of the classroom--- students and faculty alike.

The faculty members distributed the survey they designed to the classes where they had applied the Pedagogy of Real Talk. The survey focused on how well the class had fostered a sense of connection and belonging for the students. Roughly five hundred students completed the survey, with around one fifth being students from traditionally underrepresented groups. The results were encouraging,

showing that there was a strong correlation between the students' experiences in the classroom and their sense that the faculty member had created an inclusive learning environment.

The classroom survey results were also compared with the results from the university climate-wide surveys, which had revealed "troubling markers regarding belonging."² In those surveys, for example, 75% of all students reported feeling a sense of belonging at FSU, while only 63% of the students of color said that they felt that they belonged at the institution. In contrast, the student survey conducted by the faculty cohort found that the students were "10 percentage points more likely to state that their professors cared for them and, while the survey questions were worded slightly differently, 10 percentage points more likely to experience belonging."³ The student survey revealed that traditionally underrepresented groups, both students of color and students in the LGBTQ+ community, responded very favorably to the pedagogy.

The members of the Faculty Academy plan to continue to distribute their survey in classes where they apply the Pedagogy of Real talks, in order to develop an even more robust database. In addition, they are embarking on a new research project, which will explore how applying the pedagogy and the professional development that goes with it affects faculty collective efficacy.

¹ Wendy Keyser, Wafa Unus, Jonathan Harvey, Sean C. Goodlett, Danette Day, Kisha G. Tracy, Scott Tyner, Jeff Godin, and Eric Budd.

² Keyser et al, "Empathy in Action: Developing a Sense of Belonging with the Pedagogy of 'Real Talk.'"

³ *ibid*

Adapting to the Surroundings

BY ELISE TAKEHANA

When Daniel Welsh applied to graduate school, he knew he was interested in the intersections between animal behavior, ecology, evolution, and anatomy and physiology, but happenstance brought him to fish. Now his office is lovingly decorated with fish paraphernalia. Since he arrived at Fitchburg State in 2013, Welsh has devised several potential projects which he presents to potential student collaborators. "My interests tend to bounce between different topics, but to be honest, part of it also is based on what student interests are at the moment."

While Welsh has not yet published with his students, he has an article under review that arose from the 2017-2019 Balfour funded Summer Research Collaborative, to which students participated extensively. One strategy he uses to make research with undergraduates so fruitful is to use large data sets he can get from his collaborators. Another is he selects traits that can be studied in his lab and that interest students. For instance, he and his students are using fish scales to identify differences in body parts. However, with his colleagues, he is also using fish scales in their long-term study on the reproductive behaviors of fish. "It didn't have to be scales, but it ended up being scales because we can age the fish that way, and we're interested more in the reproductive history of the fish. Sometimes the features themselves don't matter."

Welsh began this project on documenting measurable differences in scale size and patterns in those differences in the fall of 2016. Variations in a trait are interesting because evolution acts

through variation. "Differences don't exist for no reason. Usually, there's something behind it. Once you can document patterns that exist, you can then come up with possible explanations for why they exist and potentially do future projects."

Processing each fish takes 20-24 hours.

Welsh and his students first had to catch 40-60 fish and bring them to the lab to be euthanized. Each fish's body is divided into nine regions, and they select 20-30 scales from each, which is stained and individually photographed. With that processing complete, the next step becomes more onerous. Welsh is currently working with a faculty member in computer science to potentially automate the measuring process since it is so labor-intensive that after six years, students are only halfway done measuring the scales they have collected and photographed.

Since coming to Fitchburg, Welsh has done a lot more field work because it teaches students many useful techniques for their careers. And while it can be challenging to maintain research projects, Welsh sees a benefit to being at an institution like Fitchburg State. Without the "publish or perish" pressure, he and his students can conduct some riskier projects. In biology, some species are heavily studied, so there are known parameters and conditions to get those species to thrive and perform in a laboratory environment. With

new species, that knowledge has to be built through trial and error. However, it is important to study lesser-known species to determine if the traits or behaviors of a well-known species constitute what Welsh calls "a broad pattern in nature or if it's more specific to that one species?"

To help answer that question about generalizability, Welsh and his students study lesser-known species abundant in this region.

When working with a new species, you risk having to start from scratch after investing much time and effort. "I spent the whole summer working on a project here, five days a week, from the end of May to the end of August and nothing comes of it, so it can be a frustrating experience." While devising experiments that fail still provide great learning experiences for students and show them the realities of laboratory research, for Welsh it can be a year or two of lost research.

This past summer, Welsh and three of his students worked on another breeding experiment. They collected fish from Falmouth and offered them a preference of a substrate to lay eggs upon, one that was empty and one that already had eggs on it. He ran such an experiment in graduate school and wanted to see if it was repeatable with a closely related species.

Given the challenges of working with lesser-known species, Welsh has to embrace





CAPTION: From left to right, Nicole Zwicker (student), Annie Saball (student), and Dr. Daniel Welsh sorting through fish captured at one of the streams of the Nashua River system during the Summer Research Collaborative. Photo taken in 2018.

change and go with the flow. When the fish quit laying eggs, Welsh and his three students including Kaya Scarella and Kathleen Ben-Aroch had to alter the experiment. Since the fish had taken to eating eggs, they decided to test if the fish would preferentially eat eggs from fish from different tanks. “We started with an egg-laying idea so I had read some papers on egg-laying preference but when we switched to cannibalism halfway through the summer, I did not have time to then delve into the cannibalism literature. We switch midstream, no fish pun intended.”

While ultimately the fish ate all the eggs indiscriminately, Welsh will try again with a slightly different set-up for the experiment. “I’m a glutton for punishment,

so I’m trying this again next year, but I am going to get different populations of the same species and see if fish can recognize eggs from their population versus eggs from a different population, which might be more likely to evolve than the individual level recognition we were trying to do this past summer.”

Nowadays, Welsh is excited about his work on microplastics with Liz Gordon in Earth and Geographical Sciences. Liz Gordon and several of her students started a microplastics project during the Summer Research Collaborative. She gathered water samples and Welsh joined in by examining plastics in fish with several students over several semesters. While it is certainly sad that there are

microplastics in the Nashua River, that fact inevitably leads to many questions. “Are microplastics getting into the fish that are here? If so, do they affect the health of the fish? Is it affecting their behavior?” He presented work on the topic at the Ecological Society of America last August. “It’s a hot topic in the field right now, but I had no background in microplastics before this collaboration.”

At the end of the day, Welsh says, “I’m always interested in how challenges in their environment cause an organism to adapt. How do they cope with that? That’s honestly the central theme of my research.” While Welsh was talking about fish, he could just as well be referring to himself.

Teaching the Challenges of Curation

BY ELISE TAKEHANA



When the library reorganized the liaison structure in 2020, Renée Fratantonio was inadvertently charged with the children's literature section. While 2020 was an eventful year already, the murder of George Floyd provoked the library to accelerate its efforts in diversifying its collection. Given that Fratantonio was now the faculty liaison for the Education department, she also wanted to help make collection development a part of a teacher candidate's preparation, so she dug into the circulation and acquisition data. "Close to 200 books were added in 1995, but what was representation like in 1995? If most of your collection is built of books that are not very diverse, and these are the ones that our teacher candidates are taking and borrowing from the library to use as teaching materials, what can we do to improve that? How can we give teacher candidates a learning opportunity in developing a classroom library?"



Fratantonio has been visiting Lyndsey Benharris's Critical Literacy course for years already, so developing a co-taught one-credit course for Spring 2022 that got students involved in culling the children's literature collection was not a huge leap for the duo. Given their varied disciplinary backgrounds, Fratantonio and Benharris bring different perspectives to the project. Fratantonio is interested in how students find their way to certain books and how the organization and cataloging of the collection can help them find better books. For instance, if a teacher candidate

was developing a lesson on cultural holidays and relied on keyword searching to find children's books to include, how could they avoid the implicit bias of having a vocabulary for their cultural holidays but not those of other cultures?

At the same time, Benharris wants to give her students models of how to be critical of texts and mindful of who is represented in those texts. Here, one chief struggle is determining how one would find books that offer diverse perspectives when that's not something that's readily documented in its title or other metadata. "When we're talking about diversity and the need for all students to be represented, those materials might not come up in a search.

There might not be *Henry's Freedom Box*. What does that even talk about? Or *10,000 Dresses*? How would you know if you weren't exposed to those books that those books existed."

Their one-credit class began not with self-reflection, but with stacks of books and the challenging task of identifying "what's a good piece of literature and how did you find it?" In the beginning, students were hesitant to remove books from the collection, but quickly they turned to the reverse, seeing little value in many books in the collection. For Fratantonio and Benharris, that meant they "need more time to develop an understanding of the nuances of collection development. Not every book out there is a great book or a terrible book. We're not saying that just because a book has diverse

characters, it's automatically a good book.

It doesn't mean that at all. There was some struggle with that," says Fratantonio. Reflecting on this opening prompt after teaching the course brought forward the challenge of purpose. "Every museum, every library, has a mission and has a policy that drives its decisions for making certain types of purchases. Our weeding processes center on whether or not a book fulfills our library's mission. If a book does not meet the necessary criteria for teaching or learning or if it detracts from our mission to collect a diverse array of high-quality children's books, then we choose not to purchase the book or we remove it from the collection

Because the content of the class was so concrete, this issue of nuance came up clearly in many different ways. For instance, one student found a book, *Moon Baby*, on adoption that she labeled as a "bad book" because its depiction of adoption was mythologized rather than realistic and one shouldn't lie to children. For Fratantonio, "it was an interesting take, but it also disregarded how, in a book intended for young children, there would be a way of communicating the adoption process that wasn't quite as realistic as what she was looking for as an adult."

Another struggle arose with the book *Anno's USA*, illustrated by the highly acclaimed Mitsumasa Anno. "Our students initially got it into their head that because it had depictions that were not accurate, that were overly stylized in ways

that we consider racist now, Anno's books had to be thrown out. But this is still a very important text, and we need to place context in it." For Fratantonio, the book is not appropriate for the classroom setting, but it has value to anyone researching illustrators from marginalized groups. "There are all different ways that we could use this text that isn't necessarily as a teaching tool."

In other moments, the teacher candidates had opportunities to check their own biases by questioning why they wanted to remove certain books from the collection. The students found a book about jobs a mother has had, and one page mentioned "a dancer at night." The book didn't show anything inappropriate, just a high heel shoe over a background of bright colors. Benharris pressed them about what might be inappropriate and to whom. "They were starting to see if you're a five-year-old and your mom did dance for money, and you saw it in a book, wouldn't you feel proud instead of ashamed? It wasn't stigmatizing it. It was destigmatizing that this would be a profession. It's a viable profession."

The scale of the project just continues to snowball for many reasons. For instance, students wanted to develop lists of books on thematic topics that others could use, which seems potentially practical but removes the discovery process for others. Also, in looking at the collection at Fitchburg State and the demands of maintaining a strong collection, the trend across Massachusetts of removing librarians from schools felt especially dire. According to Fratantonio, "the decline in librarians at the school level can't be accounted for with just this move to the media specialist. It can't be accounted for with the number of librarians that have been lost,

despite research suggesting that a librarian in a school increases literacy attainment."

The loss of school librarians makes the job of a teacher ever harder and the national debates on Critical Race Theory will color this work of cultivating school libraries. Certainly the co-opting of the term CRT has put teachers and school librarians in a defensive position. "For example, take Christopher Columbus and or the teaching of Thanksgiving. How do you talk about these cultural myths in a way that isn't going to upset the applecart and can you do it in a way that isn't going to incur the wrath of others? It's a very difficult landscape that we're sending them out into, so I hope that what we're doing is giving them their own language and experiences to be ready for this reality," says Fratantonio.

At this stage of the project, Benharris wants to find a curricular

context where they can provide the necessary support and context for the more nuanced needs of collection development that they discovered last spring. The two are also working on a book chapter on their experiences working with students on library collection development. Fratantonio wants to work on differentiating weeding from censoring, which is hard with the limited time of a one-credit class. She is also hopeful that a new integrated library system "will allow us to do more flexible things that will be useful, including creating mini lists and mini collections."

Benharris and Fratantonio ultimately have the same goal. "We want our students to be able to be successful when they're looking for texts for their classroom. And we want them to be successful when they're building their own libraries in their classroom and critical of their school libraries if they are so lucky to have them."



Events

Please send details of events related to faculty research or intellectual life to etakehan@fitchburgstate.edu for inclusion on the Center for Faculty Scholarship's calendar and newsletter.

02 03 23

Deadline

The MSCA Professional Development funding applications for Summer 2023 projects are due to academicaffairs@fitchburgstate.edu

02 06 23

12:30 Google Meets

Faculty Speaker Series featuring Jeff Warmouth (Communication Media) in his talk "Fast Food and (Fake) Sculpture, the Art of Jeffu Warmouth." <https://meet.google.com/oyq-acav-kwr>

03 13 23

12:30 Google Meets

The Faculty Speaker Series features Patricia Kio (Engineering) in her talk "Italianate Architectural Heritage and Photovoltaic Systems; Matching Style with Sustainability in Northern Worcester County, Massachusetts." <https://meet.google.com/ogz-wtiq-orb>

03 14 23

3:30 Ellis White

Save the date for Spring Research Week's panel or lightning talks on "Mental Health in America." More information to come.

03 15 23

3:30 Science Lecture Hall

Save the date for Spring Research Week's guest lecture who will speak on an aspect of mental health. More information to come.

03 16 23

2:00 Hammond Main Lounge

Save the date for Spring Research Week's Wellness Workshop. More information to come.

03 24 23

Deadline

The MSCA Professional Development funding applications for Fall 2023 projects are due to academicaffairs@fitchburgstate.edu

04 03 23

12:30 Google Meets

The Faculty Speaker Series features Andrew Linscott (Peer Services) in his talk "The Evolutionary and Cognitive Science of Religion in Philosophical Perspective." <https://meet.google.com/hmv-okvb-xy>

05 01 23

12:30 Google Meets

The Faculty Speaker Series features Jennie Snow (English Studies) in her talk "Framing Guantánamo Bay Prison: Release, 'Reentry,' and Art Collaborations." <https://meet.google.com/dtn-jtjb-skh>



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